

Claims

1. A sensor arrangement (1, 3, 5) remotely readable by radio frequencies for determining desired quantities from the sources, wherein the arrangement comprises
- 5
- an LC resonator (3, 5), which comprises a capacitor (3) and a coil (5), and
 - a sensor element (1) coupled to the LC resonator (3, 5), whose properties change as a function of a measurable quantity,
- 10
- characterized in that**
- the sensor element (1) does not form a direct galvanic contact with the LC resonator (3, 5), rather the coupling is implemented ca-
- 15
2. An arrangement (1, 3, 5) according to claim 1, **characterized** in that the sensor element (1) is cumulatively variable.
- 20
3. An arrangement (1, 3, 5) according to claim 1 or 2, **characterized** in that it is suitable for use in monitoring deterioration of foodstuffs and medicinal substances.
4. An arrangement (1, 3, 5) according to one of the preceding claims, **characterized** in that the sensor element (1) is adapted to couple capacitively to the LC circuit (3, 5).
- 25
5. An arrangement (1, 3, 5) according to claim 4, **characterized** in that the capacitively couplable sensor element (1) is disposed on top of the coil (5).
- 30
6. An arrangement (1, 3, 5) according to claim 4, **characterized** in that the capacitively couplable sensor element (1) is disposed alone inside the package.
7. An arrangement (1, 3, 5) according to one of the preceding claims, **characterized** in that the sensor element (1) is adapted to couple inductively to the LC resonator (3, 5).
- 35
8. An arrangement (1, 3, 5) according to claim 7, **characterized** in that the inductively couplable sensor element (1) is disposed in the middle of the coil (5).

9. An arrangement (1, 3, 5) according to claim 5, **characterized** in that the inductively couplable sensor element (1) is disposed alone inside the package.
- 5 10. An arrangement (1, 3, 5) according to claim 9, **characterized** in that the inductively couplable sensor element (1) is disposed inside the ring (2) that is thicker than the measuring element (1) and electrically conductive.
- 10 11. An arrangement (1, 3, 5) according to claim 10, **characterized** in that the ring (2) is circular, oval or polygonal in shape.
12. A method for a sensor arrangement (1, 3, 5) remotely readable by radio frequencies, wherein the arrangement comprises
- 15 - an LC resonator (3, 5), which comprises a capacitor (3) and a coil (5), and
- a sensor element (1) coupled to the LC resonator (3, 5), whose properties change as a function of a measurable quantity,
- 20 **characterized** in that
- the sensor element (1) is disposed in the sensor arrangement such that it does not form a direct galvanic contact with the LC resonator (3, 5), rather the coupling is implemented capacitively or inductively.
- 25
13. A method according to claim 12, **characterized** in that the sensor element (1) is cumulatively variable.
- 30 14. A method according to claim 12 or 13, **characterized** in that it is used in monitoring of deterioration of foodstuffs or medicinal substances.
15. A method according to claim 14, **characterized** in that the variable sensor element (1) is adapted to couple capacitively to the LC resonator (3, 5).
- 35 16. A method according to claim 15, **characterized** in that the capacitively couplable sensor element (1) is disposed on top of the coil (5).

17. A method according to claim 15, **characterized** in that the capacitively couplable sensor element (1) is disposed alone inside the package.
18. A method according to claim 12, **characterized** in that the cumulatively variable sensor element (1) is adapted to couple inductively to the LC resonator (3, 5).
19. A method according to claim 12, **characterized** in that the inductively couplable sensor element (1) is disposed in the middle of the coil (5).
20. A method according to claim 18, **characterized** in that the inductively couplable sensor element (1) is disposed alone inside the package.
21. A method according to claim 20, **characterized** in that the inductively couplable sensor element (1) is disposed inside the ring (2) that is thicker than the measuring element (1) and electrically conductive.
22. A method according to claim 21, **characterized** in that the ring (2) is circular, oval or polygonal in shape.